

Connecting via Winsock to Dialog

Logging in to Dialog

Trying 31060000009999...Open

DIALOG INFORMATION SERVICES

PLEASE LOGON:

\*\*\*\*\*

ENTER PASSWORD:

\*\*\*\*\*

Welcome to DIALOG

Dialog level 02.16.02D

Last logoff: 01jul03 18:05:19

Logon file405 02jul03 11:44:28

\*\*\* ANNOUNCEMENT \*\*\*

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--File 654 - US published applications from March 15, 2001 to the present are now online. Please see HELP NEWS 654 for details.

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--File 581 - The 2003 annual reload of Population Demographics is complete. Please see Help News581 for details.

\*\*\*

--File 156 - The 2003 annual reload of ToxFile is complete. Please see HELP NEWS156 for details.

\*\*\*

--File 990 - NewsRoom now contains February 2003 to current records.  
File 992 - NewsRoom 2003 archive has been newly created and contains records from January 2003. The oldest months's records roll out of File 990 and into File 992 on the first weekend of each month.  
To search all 2003 records BEGIN 990, 992, or B NEWS2003, a new OneSearch category.

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--Connect Time joins DialUnits as pricing options on Dialog.  
See HELP CONNECT for information.

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--SourceOne patents are now delivered to your email inbox as PDF replacing TIFF delivery. See HELP SOURCE1 for more information.

\*\*\*

--Important news for public and academic libraries. See HELP LIBRARY for more information.

\*\*\*

--Important Notice to Freelance Authors--  
See HELP FREELANCE for more information

\*\*\*

NEW FILES RELEASED

\*\*\*World News Connection (File 985)

\*\*\*Dialog NewsRoom - 2003 Archive (File 992)

\*\*\*TRADEMARKSCAN-Czech Republic (File 680)

\*\*\*TRADEMARKSCAN-Hungary (File 681)

\*\*\*TRADEMARKSCAN-Poland (File 682)

\*\*\*

UPDATING RESUMED

\*\*\*  
RELOADED  
\*\*\*Population Demographics -(File 581)  
\*\*\*CLAIMS Citation (Files 220-222)

REMOVED  
\*\*\*

>>> Enter BEGIN HOMEBASE for Dialog Announcements <<<  
>>> of new databases, price changes, etc. <<<  
\*\*\*\*

\* \* \* \* See HELP NEWS 225 for information on new search prefixes  
and display codes

\*\*\*

SYSTEM:HOME  
Cost is in DialUnits  
Menu System II: D2 version 1.7.9 term=ASCII  
\*\*\* DIALOG HOMEBASE(SM) Main Menu \*\*\*

Information:

1. Announcements (new files, reloads, etc.)
2. Database, Rates, & Command Descriptions
3. Help in Choosing Databases for Your Topic
4. Customer Services (telephone assistance, training, seminars, etc.)
5. Product Descriptions

Connections:

6. DIALOG(R) Document Delivery
7. Data Star(R)

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/H = Help      /L = Logoff      /NOMENU = Command Mode

Enter an option number to view information or to connect to an online  
service. Enter a BEGIN command plus a file number to search a database  
(e.g., B1 for ERIC).  
? b 410

02jul03 11:44:29 User268147 Session D98.1  
\$0.00 0.149 DialUnits FileHomeBase  
\$0.00 Estimated cost FileHomeBase  
\$0.00 Estimated cost this search  
\$0.00 Estimated total session cost 0.149 DialUnits

File 410:Chronolog(R) 1981-2003/Aug  
(c) 2003 The Dialog Corporation

Set Items Description

? set hi %%;set hi %%;  
HILIGHT set on as "  
HILIGHT set on as "  
? b 5, 34, 155, 172

02jul03 11:44:40 User268147 Session D98.2  
\$0.00 0.071 DialUnits File410  
\$0.00 Estimated cost File410  
\$0.04 TELNET  
\$0.04 Estimated cost this search

\$0.04 Estimated total session cost 0.220 DialUnits

SYSTEM:OS - DIALOG OneSearch

File 5:Biosis Previews(R) 1969-2003/Jun W4

(c) 2003 BIOSIS

File 34:SciSearch(R) Cited Ref Sci 1990-2003/Jun W5

(c) 2003 Inst for Sci Info

File 155:MEDLINE(R) 1966-2003/Jun W4

(c) format only 2003 The Dialog Corp.

\*File 155: Medline has been reloaded and accession numbers have changed. Please see HELP NEWS 155.

File 172:EMBASE Alert 2003/Jun W5

(c) 2003 Elsevier Science B.V.

Set Items Description

? s "epidermolysis bullosa"

S1 1899 "EPIDERMOLYSIS BULLOSA"

? s cytosine

S2 48128 CYTOSINE

? s 1368

S3 586 1368

? s ?1368?

>>>File 5 processing for ?1368? stopped at ACROLAXUS ORIENTALIS (ORGANISMS - UNSPECIFIED)

>>>File 34 processing for ?1368? stopped at ADDNRHOK

>>>File 155 processing for ?1368? stopped at ALLERGOGENI

□

S4 0 ?1368?

? s 1368?

S5 700 1368?

? s laminin

S6 40863 LAMININ

? s s6 and (insert or mutation or mutated or insertion or deletion or substitution)

40863 S6

29972 INSERT

522151 MUTATION

60560 MUTATED

167009 INSERTION

221200 DELETION

206582 SUBSTITUTION

S7 1810 S6 AND (INSERT OR MUTATION OR MUTATED OR INSERTION OR DELETION OR SUBSTITUTION)

? ds

Set Items Description

S1 1899 "EPIDERMOLYSIS BULLOSA"

S2 48128 CYTOSINE

S3 586 1368

S4 0 ?1368?

S5 700 1368?

S6 40863 LAMININ

S7 1810 S6 AND (INSERT OR MUTATION OR MUTATED OR INSERTION OR DELETION OR SUBSTITUTION)

? s s3 or s5

586 S3

700 S5

S8 700 S3 OR S5

? s s1 and s8

1899 S1

700 S8

S9 0 S1 AND S8

112  
246  
546 ?

? s s8 and s2  
700 S8  
48128 S2  
S10 0 S8 AND S2

?

PLEASE ENTER A COMMAND OR BE LOGGED OFF IN 5 MINUTES

? s s7 and s1

>>>Term "ANDS1" in invalid position

? s s7 and s1

1810 S7  
1899 S1  
S11 37 S7 AND S1

? s s11 and cytosine

37 S11  
48128 CYTOSINE  
S12 1 S11 AND CYTOSINE

? type s12/full/all

12/9/1 (Item 1 from file: 34)

DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

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11469061 Genuine Article#: 654YK Number of References: 22

Title: A mutation in the LAMC2 gene causes the Herlitz junctional epidermolysis bullosa (H-JEB) in two French draft horse breeds

Author(s): Milenkovic D; Chaffaux S; Taourit S; Guerin G (REPRINT)

Corporate Source: INRA,Ctr Rech Jouy, Dept Genet Anim, Lab Genet Biochim & Cytogenet,F-78352 Jouy En Josas//France/ (REPRINT); INRA,Ctr Rech Jouy, Dept Genet Anim, Lab Genet Biochim & Cytogenet,F-78352 Jouy En Josas//France/

Journal: GENETICS SELECTION EVOLUTION, 2003, V35, N2 (MAR-APR), P249-256

ISSN: 0999-193X Publication date: 20030300

Publisher: E D P SCIENCES, 7, AVE DU HOGGAR, PARC D ACTIVITES COURTABOEUF, BP 112, F-91944 LES ULIS CEDEXA, FRANCE

Language: English Document Type: ARTICLE

Geographic Location: France

Journal Subject Category: AGRICULTURE, DAIRY & ANIMAL SCIENCE; GENETICS & HEREDITY

Abstract: Epidermolysis bullosa (EB) is a heterogeneous group of inherited diseases characterised by skin blistering and fragility. In humans, one of the most severe forms of EB known as Herlitz-junctional EB (H-JEB), is caused by mutations in the laminin 5 genes. EB has been described in several species, like cattle, sheep, dogs, cats and horses where the mutation, a cytosine insertion in exon 10 of the LAMC2 gene, was very recently identified in Belgian horses as the mutation responsible for JEB. In this study, the same mutation was found to be totally associated with the JEB phenotype in two French draft horse breeds, Trait Breton and Trait Comtois. This result provides breeders a molecular test to better manage their breeding strategies by genetic counselling.

Descriptors--Author Keywords: horse ; LAMC2 ; epidermolysis bullosa ; laminin 5

Identifiers--KeyWord Plus(R): MECHANOBULLOUS DISEASE; CLASSIFICATION; DIAGNOSIS; POSITION

Cited References:

AUMAILLEY M, 1998, V193, P1, J ANAT 1  
BRENNEMAN KA, 2000, V37, P4336, VET PATHOL  
BRETHELSEN H, 1935, V48, P258, J COMP PATH THER  
BRUCKNERTUDERMA.L, 1991, V96, P452, J INVEST DERMATOL  
COLOGNATO H, 1999, V9, P1327, CURR BIOL  
CROWELL WA, 1976, V168, P56, J AM VET MED ASSOC  
DUBIELZIG RR, 1986, V23, P325, VET PATHOL

FINE JD, 2000, V42, P1051, J AM ACAD DERMATOL  
 FINE JD, 1991, V24, P119, J AM ACAD DERMATOL  
 FRAME SR, 1988, V193, P1420, J AM VET MED ASSOC  
 GOUREAU JM, 1989, V62, P345, B ACAD VET FR  
 HOOD J, 2001, V11, P463, TRENDS CELL BIOL  
 JOHNSON GC, 1998, V99, P329, J COMP PATHOL  
 KOHN CW, 1989, V21, P297, EQUINE VET J  
 KORGE BP, 1996, V74, P59, J MOL MED-JMM  
 LYKKEANDERSEN J, 2001, V293, P1836, SCIENCE  
 NAGY E, 1998, V23, P198, TRENDS BIOCHEM SCI  
 OLIVRY T, 1999, V36, P616, VET PATHOL  
 PALAZZI X, 2000, V115, P135, J INVEST DERMATOL  
 PULKKINEN L, 1999, V18, P29, MATRIX BIOL  
 SPIRITO F, 2002, V3, P684, J INVEST DERMATOL  
 TERWILLIGER JD, 1995, V56, P777, AM J HUM GENET

? s lamc2

S13 201 LAMC2

? ds

| Set                 | Items | Description   |
|---------------------|-------|---|
| S1                  | 1899  | "EPIDERMOLYSIS BULLOSA"   |
| S2                  | 48128 | CYTOSINE  |
| S3                  | 586   | 1368  |
| S4                  | 0     | ?1368?  |
| S5                  | 700   | 1368?   |
| S6                  | 40863 | LAMININ   |
| S7                  | 1810  | S6 AND (INSERT OR MUTATION OR MUTATED OR INSERTION OR DELETION OR SUBSTITUTION) |
| S8                  | 700   | S3 OR S5  |
| S9                  | 0     | S1 AND S8   |
| S10                 | 0     | S8 AND S2   |
| S11                 | 37    | S7 AND S1   |
| S12                 | 1     | S11 AND CYTOSINE  |
| S13                 | 201   | LAMC2   |
| ? s s13 and s3      |       |   |
|                     | 201   | S13   |
|                     | 586   | S3  |
| S14                 | 0     | S13 AND S3  |
| ? s s13 and s5      |       |   |
|                     | 201   | S13   |
|                     | 700   | S5  |
| S15                 | 3     | S13 AND S5  |
| ? type s15/full/all |       |   |

15/9/1 (Item 1 from file: 5)  
 DIALOG(R)File 5:Biosis Previews(R)  
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13909810 BIOSIS NO.: 200200538631  
 Animal models for skin blistering conditions: Absence of laminin 5 causes hereditary junctional mechanobullous disease in the Belgian horse.  
 AUTHOR: Spirito Flavia; Charlesworth Alexandra; Linder Keith; Ortonne Jean-Paul; Baird John; Meneguzzi Guerrino(a)  
 AUTHOR ADDRESS: (a)INSERM U385, UFR de Medecine, Avenue de Valombrose, 06107, Nice Cedex 2\*\*France E-Mail: meneguzzi@unice.fr  
 JOURNAL: Journal of Investigative Dermatology 119 (3):p684-691 September, 2002  
 MEDIUM: print  
 ISSN: 0022-202X  
 DOCUMENT TYPE: Article  
 RECORD TYPE: Abstract  
 LANGUAGE: English

**ABSTRACT:** Recent achievements in the genetic correction of keratinocytes isolated from patients with junctional epidermolysis bullosa have paved the way to a gene therapy approach for the disease. Because gene therapy protocols require preclinical validation in animals, we have characterized spontaneous animal models of junctional epidermolysis bullosa. In this study we have elucidated the genetic basis of the hereditary junctional mechanobullous disease in the Belgian horse, a condition characterized by blistering of the skin and mouth epithelia, and exungulation (loss of the hoof). Immunofluorescence analysis associated the condition to the absent expression of the gamma2 chain of laminin 5 and designated *Lamc2* as the candidate gene. Comparative analysis of the nucleotide sequence of the full-length gamma2 cDNA isolated by reverse transcription polymerase chain reaction amplification of total RNA purified from the epithelium of a junctional epidermolysis bullosa foal and a healthy control disclosed a homozygous basepair insertion (1368insC) in the affected animal. Mutation 1368insC results in a downstream premature termination codon and is predicted to cause absent expression of the laminin gamma2 polypeptide. Our results also show that: (i) the horse junctional epidermolysis bullosa genetically corresponds to the severe Herlitz form of junctional epidermolysis bullosa in man; (ii) the amino acid sequence and structure of the horse laminin gamma2 chain are virtually identical to the human counterpart; (iii) the moderate eruption of skin blisters in the affected animals with respect to the human Herlitz junctional epidermolysis bullosa patients correlates with the protection provided by hair. Our observations suggest that the affected foals are a convenient source of epithelial cells from tissues that cannot be obtained from human junctional epidermolysis bullosa patients, and imply that hairless strains of animals with recessive skin disorders would be the best models for in vivo gene therapy approaches to skin blistering diseases.

**DESCRIPTORS:**

**MAJOR CONCEPTS:** Biochemistry and Molecular Biophysics; Integumentary System (Chemical Coordination and Homeostasis)

**BIOSYSTEMATIC NAMES:** Equidae--Perissodactyla, Mammalia, Vertebrata, Chordata, Animalia

**ORGANISMS:** horse (Equidae)--animal model, breed-Belgian, foal

**ORGANISMS: PARTS ETC:** epidermis--integumentary system; hoof--integumentary system; mouth epithelia--dental and oral system

**BIOSYSTEMATIC CLASSIFICATION (SUPER TAXA):** Animals; Chordates; Mammals; Nonhuman Mammals; Nonhuman Vertebrates; Perissodactyls; Vertebrates

**DISEASES:** epitheliogenesis imperfecta--integumentary system disease; exungulation--integumentary system disease; genodermatosis--integumentary system disease; hereditary junctional mechanobullous disease--genetic disease, integumentary system disease; skin blistering--integumentary system disease

**CHEMICALS & BIOCHEMICALS:** cDNA {complementary DNA}; laminin 5--absence

**CONCEPT CODES:**

03506 Genetics and Cytogenetics-Animal

10060 Biochemical Studies-General

10062 Biochemical Studies-Nucleic Acids, Purines and Pyrimidines

18504 Integumentary System-Physiology and Biochemistry

18506 Integumentary System-Pathology

19004 Dental and Oral Biology-Physiology and Biochemistry

**BIOSYSTEMATIC CODES:**

86145 Equidae

15/9/2 (Item 1 from file: 34)

DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

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1111016 Genuine Article#: 592RV Number of References: 52

Title: Animal models for skin blistering conditions: Absence of laminin 5 causes hereditary junctional mechanobullous disease in the Belgian horse

Author(s): Spirito F (REPRINT) ; Charlesworth A; Linder K; Ortonne JP; Baird J; Meneguzzi G

Corporate Source: Fac Med,INSERM U385, UFR Med,Ave Valombrose/F-06107 Nice 2//France/ (REPRINT); Fac Med,INSERM U385, UFR Med,F-06107 Nice 2//France/; Univ Guelph,Ontario Vet Coll, Dept Pathobiol,Guelph/ON N1G 2W1/Canada/; Univ Guelph,Ontario Vet Coll, Dept Clin Studies,Guelph/ON N1G 2W1/Canada/

Journal: JOURNAL OF INVESTIGATIVE DERMATOLOGY, 2002, V119, N3 (SEP), P 684-691

ISSN: 0022-202X Publication date: 20020900

Publisher: BLACKWELL PUBLISHING INC, 350 MAIN ST, MALDEN, MA 02148 USA

Language: English Document Type: ARTICLE

Geographic Location: France; Canada

Journal Subject Category: DERMATOLOGY & VENEREAL DISEASES

Abstract: Recent achievements in the genetic correction of keratinocytes isolated from patients with junctional epidermolysis bullosa have paved the way to a gene therapy approach for the disease. Because gene therapy protocols require preclinical validation in animals, we have characterized spontaneous animal models of junctional epidermolysis bullosa. In this study we have elucidated the genetic basis of the hereditary junctional mechanobullous disease in the Belgian horse, a condition characterized by blistering of the skin and mouth epithelia, and exungulation (loss of the hoof): Immunofluorescence analysis associated the condition to the absent expression of the gamma2 chain of laminin 5 and designated Lamc2 as the candidate gene. Comparative analysis of the nucleotide sequence of the full-length gamma2 cDNA isolated by reverse transcription polymerase chain reaction amplification of total RNA purified from the epithelium of a junctional epidermolysis bullosa foal and a healthy control disclosed a homozygous basepair insertion (1368insC) in the affected animal. Mutation 1368insC results in a downstream premature termination codon and is predicted to cause absent expression of the laminin gamma2 polypeptide. Our results also show that: (i) the horse junctional epidermolysis bullosa genetically corresponds to the severe Herlitz form of junctional epidermolysis bullosa in man; (ii) the amino acid sequence and structure of the horse laminin gamma2 chain are virtually identical to the human counterpart; (iii) the moderate eruption of skin blisters in the affected animals with respect to the human Herlitz junctional epidermolysis bullosa patients correlates with the protection provided by hair. Our observations suggest that the affected foals are a convenient source of epithelial cells from tissues that cannot be obtained from human junctional epidermolysis bullosa patients, and imply that hairless strains of animals with recessive skin disorders would be the best models for in vivo gene therapy approaches to skin blistering diseases.

Descriptors--Author Keywords: epitheliogenesis imperfecta ; genodermatosis ; Lamc2

Identifiers--KeyWord Plus(R): DYSTROPHIC EPIDERMOLYSIS-BULLOSA; CORRECTIVE GENE-TRANSFER; GAMMA-2 CHAIN; BRANCHING MORPHOGENESIS; MONOCLONAL-ANTIBODY; EPITHELIAL-CELLS; VII COLLAGEN; LAMB3 GENE; B2 CHAIN; EXPRESSION

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 COOPER DN, 1993, V25, P7, ANN MED  
 CUI Y, 1995, V9, P423, GENE DEV  
 DELLAMBRA E, 1998, V9, P1359, HUM GENE THER  
 FINE JD, 2000, V42, P1051, J AM ACAD DERMATOL  
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 FREIBERG RA, 1997, V6, P927, HUM MOL GENET  
 GACHE Y, 1996, V97, P2289, J CLIN INVEST  
 GAGNOUXPALACIOS L, 2001, V153, P835, J CELL BIOL  
 GEDDEDAHL T, 1996, P1225, EMERY RIMOINS PRINCI  
 GHAZIZADEH S, 1999, V6, P1267, GENE THER  
 GOURREAU JM, 1990, V22, P65, POINT VET  
 HEINONEN S, 1999, V112, P3641, J CELL SCI  
 HORMIA M, 1998, V77, P1479, J DENT RES  
 JOHNSON GC, 1988, V98, P329, J COMP PATHOL  
 KADOYA Y, 1999, V112, P417, HISTOCHEM CELL BIOL  
 KALLUNKI P, 1992, V119, P679, J CELL BIOL  
 KOHN CW, 1989, V21, P297, EQUINE VET J  
 KUSTER JE, 1997, V8, P673, MAMM GENOME  
 MARINKOVICH MP, 1992, V267, P17900, J BIOL CHEM  
 MATSUI C, 1995, V105, P648, J INVEST DERMATOL  
 MENEGUZZI G, 2000, P97, SKIN GENE THERAPY  
 NISHIZAWA Y, 1993, V113, P493, J BIOCHEM-TOKYO  
 PALAZZI X, 2000, V115, P135, J INVEST DERMATOL  
 ROBBINS PB, 2001, V98, P5193, P NATL ACAD SCI USA  
 ROUSSELLE P, 1997, V138, P719, J CELL BIOL  
 RYAN MC, 1999, V145, P1309, J CELL BIOL  
 SAHLBERG C, 1998, V77, P1589, J DENT RES  
 SALO S, 1999, V18, P197, MATRIX BIOL  
 SAMBROOK J, 1989, MOL CLONING LAB MANU  
 SASAKI T, 2001, V314, P751, J MOL BIOL  
 SEITZ CS, 1999, V6, P42, GENE THER  
 SHAPIRO J, 1995, V36, P572, CAN VET J  
 SHIMIZU H, 1997, V289, P174, ARCH DERMATOL RES  
 SONNENBERG A, 1987, V262, P10376, J BIOL CHEM  
 SPIRITO F, 2001, V3, P21, J GENE MED  
 STAHL S, 1997, V110, P55, J CELL SCI 1  
 SUGIYAMA S, 1995, V228, P120, EUR J BIOCHEM  
 THOMPSON JD, 1994, V22, P4673, NUCLEIC ACIDS RES  
 UTTI J, 2001, V137, P1458, ARCH DERMATOL  
 VAILLY J, 1994, V219, P209, EUR J BIOCHEM  
 VAILLY J, 1998, V5, P1322, GENE THER  
 VIDAL F, 1995, V10, P229, NAT GENET  
 WOJCIK SM, 2001, V154, P619, J CELL BIOL  
 ZENT R, 2001, V238, P289, DEV BIOL

15/9/3 (Item 1 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

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10188137 22218275 PMID: 12230513

Animal models for skin blistering conditions: absence of laminin 5 causes hereditary junctional mechanobullous disease in the Belgian horse.

Spirito Flavia; Charlesworth Alexandra; Linder Keith; Ortonne Jean-Paul; Baird John; Meneguzzi Guerrino

INSERM U385, Faculte de Medecine, Nice, France.

Journal of investigative dermatology (United States) Sep 2002, 119

(3) p684-91, ISSN 0022-202X Journal Code: 0426720

Document type: Journal Article



Languages: ENGLISH  
Main Citation Owner: NLM  
Record type: Completed  
Subfile: INDEX MEDICUS

Recent achievements in the genetic correction of keratinocytes isolated from patients with junctional epidermolysis bullosa have paved the way to a gene therapy approach for the disease. Because gene therapy protocols require preclinical validation in animals, we have characterized spontaneous animal models of junctional epidermolysis bullosa. In this study we have elucidated the genetic basis of the hereditary junctional mechanobullous disease in the Belgian horse, a condition characterized by blistering of the skin and mouth epithelia, and exungulation (loss of the hoof). Immunofluorescence analysis associated the condition to the absent expression of the gamma2 chain of laminin 5 and designated *Lamc2* as the candidate gene. Comparative analysis of the nucleotide sequence of the full-length gamma2 cDNA isolated by reverse transcription polymerase chain reaction amplification of total RNA purified from the epithelium of a junctional epidermolysis bullosa foal and a healthy control disclosed a homozygous basepair insertion (1368insC) in the affected animal. Mutation 1368insC results in a downstream premature termination codon and is predicted to cause absent expression of the laminin gamma2 polypeptide. Our results also show that: (i) the horse junctional epidermolysis bullosa genetically corresponds to the severe Herlitz form of junctional epidermolysis bullosa in man; (ii) the amino acid sequence and structure of the horse laminin gamma2 chain are virtually identical to the human counterpart; (iii) the moderate eruption of skin blisters in the affected animals with respect to the human Herlitz junctional epidermolysis bullosa patients correlates with the protection provided by hair. Our observations suggest that the affected foals are a convenient source of epithelial cells from tissues that cannot be obtained from human junctional epidermolysis bullosa patients, and imply that hairless strains of animals with recessive skin disorders would be the best models for in vivo gene therapy approaches to skin blistering diseases.

Tags: Animal; Human; Support, Non-U.S. Gov't  
Descriptors: \*Cell Adhesion Molecules--genetics--GE; \*Disease Models, Animal; \*Epidermolysis Bullosa, Junctional--genetics--GE; \*Epidermolysis Bullosa, Junctional--physiopathology--PP; \*Horses; Blister--genetics--GE; Blister--physiopathology--PP; DNA, Complementary; Epithelium--pathology--PA; Genotype; Joints--pathology--PA; Laminin--genetics--GE; Molecular Sequence Data; Pedigree; Point Mutation; Sequence Homology, Amino Acid  
CAS Registry No.: 0 (Cell Adhesion Molecules); 0 (DNA, Complementary); 0 (Laminin); 0 (laminin); 0 (laminin gamma 2)

Record Date Created: 20020916

Record Date Completed: 20021010

? ds

| Set | Items | Description   |
|-----|-------|---|
| S1  | 1899  | "EPIDERMOLYSIS BULLOSA"   |
| S2  | 48128 | CYTOSINE  |
| S3  | 586   | 1368  |
| S4  | 0     | ?1368?  |
| S5  | 700   | 1368?   |
| S6  | 40863 | LAMININ   |
| S7  | 1810  | S6 AND (INSERT OR MUTATION OR MUTATED OR INSERTION OR DELETION OR SUBSTITUTION) |
| S8  | 700   | S3 OR S5  |
| S9  | 0     | S1 AND S8   |
| S10 | 0     | S8 AND S2   |
| S11 | 37    | S7 AND S1   |
| S12 | 1     | S11 AND CYTOSINE  |
| S13 | 201   | LAMC2   |
| S14 | 0     | S13 AND S3  |

S15 3 S13 AND S5

? s s1 and s2

1899 S1

48128 S2

S16 2 S1 AND S2

? type s16/full/all

16/9/1 (Item 1 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

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08474655 BIOSIS NO.: 199344024655

PCR-based detection of two exonic polymorphisms in the human type VII

collagen gene (COL7A1) at 3p21.1.

AUTHOR: Christiano Angela M(a); Chung-Honet Linda C; Hovnanian Alain; Uitto Jouni

AUTHOR ADDRESS: (a)Dep. Dermatol., Jefferson Med. College, Thomas Jefferson University, Philadelphia, Pa. 19107

JOURNAL: Genomics 14 (3):p827-828 1992

ISSN: 0888-7543

DOCUMENT TYPE: Article

RECORD TYPE: Citation

LANGUAGE: English

REGISTRY NUMBERS: 81295-04-7: ALUI; 73-40-5Q: GUANINE; 69257-39-2Q: GUANINE

; 73-24-5: ADENINE; 71-30-7: CYTOSINE; 60-18-4: TYROSINE

DESCRIPTORS:

MAJOR CONCEPTS: Anthropology; Biochemistry and Molecular Biophysics;

Clinical Chemistry (Allied Medical Sciences); Dermatology (Human

Medicine, Medical Sciences); Genetics; Pathology; Population Genetics

(Population Studies)

BIOSYSTEMATIC NAMES: Hominidae--Primates, Mammalia, Vertebrata, Chordata, Animalia

ORGANISMS: Hominidae (Hominidae)

BIOSYSTEMATIC CLASSIFICATION (SUPER TAXA): animals; chordates; humans; mammals; primates; vertebrates

CHEMICALS & BIOCHEMICALS: ALUI; GUANINE; ADENINE; CYTOSINE; TYROSINE

GEOGRAPHICAL NAME: USA (North America, Nearctic region)

MISCELLANEOUS TERMS: ALLELIC FREQUENCY; ALUI POLYMORPHISM; CAUCASIAN;

CO-SEGREGATION; COMPLEMENTARY DNA; CYTOSINE TO TYROSINE

TRANSITION; DIAGNOSTIC METHOD; EPIDERMOLYSIS BULLOSA; FINNS; GENE

MAPPING; GENE MARKER; GREEKS; GUANINE TO ADENINE TRANSITION; JAPANESE;

MENDELIAN SEGREGATION; MOLECULAR DIAGNOSTICS; NOTE; POLYMERASE CHAIN

REACTION; PVUII POLYMORPHISM; RESTRICTION FRAGMENT LENGTH POLYMORPHISM;

SOUTHERN BLOT

CONCEPT CODES:

03508 Genetics and Cytogenetics-Human

03509 Genetics and Cytogenetics-Population Genetics (1972- )

05000 Physical Anthropology; Ethnobiology

10006 Clinical Biochemistry; General Methods and Applications

10062 Biochemical Studies-Nucleic Acids, Purines and Pyrimidines

10506 Biophysics-Molecular Properties and Macromolecules

12504 Pathology, General and Miscellaneous-Diagnostic

18506 Integumentary System-Pathology

02508 Cytology and Cytochemistry-Human

18004 Bones, Joints, Fasciae, Connective and Adipose Tissue-Physiology and Biochemistry

BIOSYSTEMATIC CODES:

86215 Hominidae

16/9/2 (Item 1 from file: 34)

11469061 Genuine Article#: 654YK Number of References: 22

Title: A mutation in the LAMC2 gene causes the Herlitz junctional  
epidermolysis bullosa (H-JEB) in two French draft horse breeds

Author(s): Milenkovic D; Chaffaux S; Taourit S; Guerin G (REPRINT)

Corporate Source: INRA,Ctr Rech Jouy, Dept Genet Anim, Lab Genet Biochim &  
Cytogenet,F-78352 Jouy En Josas/France/ (REPRINT); INRA,Ctr Rech Jouy,  
Dept Genet Anim, Lab Genet Biochim & Cytogenet,F-78352 Jouy En  
Josas/France/

Journal: GENETICS SELECTION EVOLUTION, 2003, V35, N2 (MAR-APR), P249-256

ISSN: 0999-193X Publication date: 20030300

Publisher: E D P SCIENCES, 7, AVE DU HOGGAR, PARC D ACTIVITES COURTABOEUF,  
BP 112, F-91944 LES ULIS CEDEXA, FRANCE

Language: English Document Type: ARTICLE

Geographic Location: France

Journal Subject Category: AGRICULTURE, DAIRY & ANIMAL SCIENCE; GENETICS &  
HEREDITY

Abstract: Epidermolysis bullosa (EB) is a heterogeneous group of inherited  
diseases characterised by skin blistering and fragility. In humans, one  
of the most severe forms of EB known as Herlitz-junctional EB (H-JEB),  
is caused by mutations in the laminin 5 genes. EB has been described in  
several species, like cattle, sheep, dogs, cats and horses where the  
mutation, a cytosine insertion in exon 10 of the LAMC2 gene, was  
very recently identified in Belgian horses as the mutation responsible  
for JEB. In this study, the same mutation was found to be totally  
associated with the JEB phenotype in two French draft horse breeds,  
Trait Breton and Trait Comtois. This result provides breeders a  
molecular test to better manage their breeding strategies by genetic  
counselling.

Descriptors--Author Keywords: horse ; LAMC2 ; epidermolysis bullosa ;  
laminin 5

Identifiers--KeyWord Plus(R): MECHANOBULLOUS DISEASE; CLASSIFICATION;  
DIAGNOSIS; POSITION

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HOOD J, 2001, V11, P463, TRENDS CELL BIOL  
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PALAZZI X, 2000, V115, P135, J INVEST DERMATOL  
PULKKINEN L, 1999, V18, P29, MATRIX BIOL  
SPIRITO F, 2002, V3, P684, J INVEST DERMATOL  
TERWILLIGER JD, 1995, V56, P777, AM J HUM GENET

? ds

| Set | Items | Description             |
|-----|-------|-------------------------|
| S1  | 1899  | "EPIDERMOLYSIS BULLOSA" |

S2 48128 CYTOSINE  
 S3 586 1368  
 S4 0 ?1368?  
 S5 700 1368?  
 S6 40863 LAMININ  
 S7 1810 S6 AND (INSERT OR MUTATION OR MUTATED OR INSERTION OR DELETION OR SUBSTITUTION)  
 S8 700 S3 OR S5  
 S9 0 S1 AND S8  
 S10 0 S8 AND S2  
 S11 37 S7 AND S1  
 S12 1 S11 AND CYTOSINE  
 S13 201 LAMC2  
 S14 0 S13 AND S3  
 S15 3 S13 AND S5  
 S16 2 S1 AND S2  
 ? s (s3 or s5) and cytosine  
     586 S3  
     700 S5  
     48128 CYTOSINE  
     S17 0 (S3 OR S5) AND CYTOSINE  
 ? s s2 and s7  
     48128 S2  
     1810 S7  
     S18 6 S2 AND S7  
 ? type s18/full/all

18/9/1 (Item 1 from file: 5)  
 DIALOG(R)File 5:Biosis Previews(R)  
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09637237 BIOSIS NO.: 199598092155  
 A homozygous nonsense mutation in the beta-3 chain gene of laminin 5 (LAMB3) in Herlitz junctional epidermolysis bullosa.  
 AUTHOR: Pulkkinen Leena; Christiano Angela M; Gerecke Donald; Wagman D Wolfe; Burgeson Robert E; Pittelkow Mark R; Uitto Jouni(a)  
 AUTHOR ADDRESS: (a)Dep. Dermatol., Jefferson Medical College, 233 South 10th Street, Room 450, Philadelphia, PA 191\*\*USA  
 JOURNAL: Genomics 24 (2):p357-360 1994  
 ISSN: 0888-7543  
 DOCUMENT TYPE: Article  
 RECORD TYPE: Abstract  
 LANGUAGE: English

**ABSTRACT:** Herlitz junctional epidermolysis bullosa (H-JEB) is a severe autosomal recessive disorder characterized by blister formation within the dermal-epidermal basement membrane. Based on immunofluorescence analysis recognizing laminin 5 epitopes (previously known as nicein/kalinin), the genes for this lamina lucida protein have been proposed as candidate genes in H-JEB. In this study, we examined the gene encoding the beta-3 polypeptide chain of laminin 5 (LAMB3) by Northern hybridization and RT-PCR analysis of keratinocyte mRNA from a proband in a family with H-JEB. Northern analysis revealed markedly reduced levels of the laminin beta-3 chain mRNA. Amplification of mRNA by RT-PCR, followed by direct nucleotide sequencing, revealed a homozygous C-to-T transition resulting in a premature termination codon (CGA fwdarw TGA) on both alleles. This mutation was verified at the genomic DNA level, and both parents were shown to be heterozygous carriers of the same mutation. This is the first description of a mutation in the laminin beta-3 chain gene (LAMB3) of laminin 5 in an H-JEB patient.

DESCRIPTORS:

MAJOR CONCEPTS: Biochemistry and Molecular Biophysics; Cell Biology;  
Dermatology (Human Medicine, Medical Sciences); Development; Genetics;  
Membranes (Cell Biology)

BIOSYSTEMATIC NAMES: Hominidae--Primates, Mammalia, Vertebrata, Chordata,  
Animalia

ORGANISMS: human (Hominidae)

BIOSYSTEMATIC CLASSIFICATION (SUPER TAXA): animals; chordates; humans;  
mammals; primates; vertebrates

MISCELLANEOUS TERMS: AUTOSOMAL RECESSIVE DISORDER; BASEMENT MEMBRANE;  
BETA-3 CHAIN; CYTOSINE-TO-THYMINE TRANSITION; KERATINOCYTE  
MESSENGER RNA; LAMINA LUCIDA PROTEIN

CONCEPT CODES:

02508 Cytology and Cytochemistry-Human  
03508 Genetics and Cytogenetics-Human  
10062 Biochemical Studies-Nucleic Acids, Purines and Pyrimidines  
10064 Biochemical Studies-Proteins, Peptides and Amino Acids  
10508 Biophysics-Membrane Phenomena  
18506 Integumentary System-Pathology  
25552 Developmental Biology-Embryology-Descriptive Teratology and  
Teratogenesis

BIOSYSTEMATIC CODES:

86215 Hominidae

18/9/2 (Item 1 from file: 34)

DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

(c) 2003 Inst for Sci Info. All rts. reserv.

11469061 Genuine Article#: 654YK Number of References: 22

Title: A mutation in the LAMC2 gene causes the Herlitz junctional  
epidermolysis bullosa (H-JEB) in two French draft horse breeds

Author(s): Milenkovic D; Chaffaux S; Taourit S; Guerin G (REPRINT)

Corporate Source: INRA, Ctr Rech Jouy, Dept Genet Anim, Lab Genet Biochim &  
Cytogenet, F-78352 Jouy En Josas/France/ (REPRINT); INRA, Ctr Rech Jouy,  
Dept Genet Anim, Lab Genet Biochim & Cytogenet, F-78352 Jouy En  
Josas/France/

Journal: GENETICS SELECTION EVOLUTION, 2003, V35, N2 (MAR-APR), P249-256

ISSN: 0999-193X Publication date: 20030300

Publisher: E D P SCIENCES, 7, AVE DU HOGGAR, PARC D ACTIVITES COURTABOEUF,  
BP 112, F-91944 LES ULIS CEDEXA, FRANCE

Language: English Document Type: ARTICLE

Geographic Location: France

Journal Subject Category: AGRICULTURE, DAIRY & ANIMAL SCIENCE; GENETICS &  
HEREDITY

Abstract: Epidermolysis bullosa (EB) is a heterogeneous group of inherited  
diseases characterised by skin blistering and fragility. In humans, one  
of the most severe forms of EB known as Herlitz-junctional EB (H-JEB),  
is caused by mutations in the laminin 5 genes. EB has been  
described in several species, like cattle, sheep, dogs, cats and horses  
where the mutation, a cytosine insertion in exon 10  
of the LAMC2 gene, was very recently identified in Belgian horses as  
the mutation responsible for JEB. In this study, the same  
mutation was found to be totally associated with the JEB  
phenotype in two French draft horse breeds, Trait Breton and Trait  
Comtois. This result provides breeders a molecular test to better  
manage their breeding strategies by genetic counselling.

Descriptors--Author Keywords: horse ; LAMC2 ; epidermolysis bullosa ;  
laminin 5

Identifiers--KeyWord Plus(R): MECHANOBULLOUS DISEASE; CLASSIFICATION;  
DIAGNOSIS; POSITION

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 OLIVRY T, 1999, V36, P616, VET PATHOL  
 PALAZZI X, 2000, V115, P135, J INVEST DERMATOL  
 PULKKINEN L, 1999, V18, P29, MATRIX BIOL  
 SPIRITO F, 2002, V3, P684, J INVEST DERMATOL  
 TERWILLIGER JD, 1995, V56, P777, AM J HUM GENET

18/9/3 (Item 2 from file: 34)  
 DIALOG(R)File 34:SciSearch(R) Cited Ref Sci  
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05982782 Genuine Article#: XM195 Number of References: 34  
 Title: Predominance of the recurrent mutation R635X in the LAMB3 gene  
 in European patients with Herlitz junctional epidermolysis bullosa has  
 implications for mutation detection strategy  
 Author(s): Pulkkinen L; Meneguzzi G; McGrath JA; Xu Y; BlanchetBardon C;  
 Ortonne JP; Christiano AM; Uitto J (REPRINT)  
 Corporate Source: THOMAS JEFFERSON UNIV,JEFFERSON MED COLL, DEPT DERMATOL &  
 CUTANEOUS BIOL, 233 S 10TH ST/PHILADELPHIA/PA/19107 (REPRINT); THOMAS  
 JEFFERSON UNIV,JEFFERSON MED COLL, DEPT DERMATOL & CUTANEOUS  
 BIOL/PHILADELPHIA/PA/19107; KUOPIO UNIV HOSP,DIV DIAGNOST SERV,  
 CHROMOSOME & DNA LAB/SF-70210 KUOPIO/FINLAND/; THOMAS JEFFERSON  
 UNIV,JEFFERSON MED COLL, DEPT BIOCHEM & MOL  
 PHARMACOL/PHILADELPHIA/PA/19107; THOMAS JEFFERSON UNIV,JEFFERSON INST  
 MOL MED, MOL DERMATOL SECT/PHILADELPHIA/PA/19107; UNIV NICE,FAC MED,  
 INSERM, U385/NICE//FRANCE/; HOP ST LOUIS,CLIN MALAD  
 CUTANEEES/PARIS//FRANCE/; HOP ST LOUIS,UNITE RECH DIAGNOST ANTENATAL  
 DERMATOL/PARIS//FRANCE/  
 Journal: JOURNAL OF INVESTIGATIVE DERMATOLOGY, 1997, V109, N2 (AUG), P  
 232-237  
 ISSN: 0022-202X Publication date: 19970800  
 Publisher: BLACKWELL SCIENCE INC, 350 MAIN ST, MALDEN, MA 02148  
 Language: English Document Type: ARTICLE  
 Geographic Location: USA; FINLAND; FRANCE  
 Subfile: CC LIFE--Current Contents, Life Sciences; CC CLIN--Current  
 Contents, Clinical Medicine  
 Journal Subject Category: DERMATOLOGY & VENEREAL DISEASES  
 Abstract: Junctional forms of epidermolysis bullosa (JEB) are characterized  
 by tissue separation at the level of the lamina lucida. We have  
 recently disclosed specific mutations in the LAMA3, LAMB3, and LAMC2  
 genes encoding the subunit polypeptides of the anchoring filament  
 protein laminin 5 in 66 families with different variants of JEB.  
 Examination of the JEB mutation database revealed recurrence of a  
 particular C-->T substitution at nucleotide position 1903 (exon  
 14) of LAMB3, resulting in the mutation R635X. The inheritance of

this nonsense mutation was noted on different genetic backgrounds, suggesting that R635X is a hotspot mutation. In this study, we have performed mutation evaluation in a European cohort of 14 families with the lethal, Herlitz type of JEB (H-JEB). The families were first screened for the presence of the R635X mutation by restriction enzyme digestion of the PCR product corresponding to exon 14. Four of the probands were found to be homozygous and six were heterozygous for R635X. The remaining alleles were subjected to mutation screening by PCR amplification of individual exons of LAMB3 and LAMC2, followed by heteroduplex analysis and nucleotide sequencing. In three families (six alleles), mutations in LAMC2 were disclosed. In the remaining eight alleles, additional pathogenetic LAMB3 mutations were found. None of the patients had LAMA3 mutation. Thus, LAMB3 mutations accounted for 22 of 28 JEB alleles (79%), and a total of 14 of 22 LAMB3 alleles (64%) harbored the R635X mutation, signifying its prevalence as a predominant genetic lesion underlying H-JEB in this European cohort of patients. This recurrent mutation will facilitate screening of additional JEB patients for the purpose of prenatal testing of fetuses at risk for recurrence.

Descriptors—Author Keywords: basement membrane zone ; laminin 5 mutations

Identifiers—KeyWord Plus(R): HOMOZYGOUS NONSENSE MUTATION; BETA-3 CHAIN GENE; LAMININ-5 LAMB3; VII COLLAGEN

Research Fronts: 95-0068 002 (DYSTROPHIN GENE; SARCOGLYCAN COMPLEX; MDX MUSCLE)

95-0857 001 (AORTIC DISSECTION; TRANSESOPHAGEAL ECHOCARDIOGRAPHY; NEONATAL MARFAN-SYNDROME)

95-4533 001 (P53 GENE; SPONTANEOUS HPRT MUTATIONS; CPG CYTOSINE METHYLATION; HOMOZYGOUS FAMILIAL HYPERCHOLESTEROLEMIA; BASE EXCISION-REPAIR; HPAT METHYLTRANSFERASE)

95-5061 001 (STRUCTURAL GENE; GLTC-DEPENDENT REGULATION OF BACILLUS-SUBTILIS GLUTAMATE SYNTHASE EXPRESSION; ARABIDOPSIS TYPE-1 PROTEIN PHOSPHATASE)

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18/9/4 (Item 3 from file: 34)  
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci  
(c) 2003 Inst for Sci Info. All rts. reserv.

05827852 Genuine Article#: XA243 Number of References: 12

Title: A recurrent laminin 5 mutation in British patients with  
lethal (Herlitz) junctional epidermolysis bullosa: Evidence for a  
mutational hotspot rather than propagation of an ancestral allele

Author(s): Ashton GHS; Mellerio JE; Dunnill MGS; Pulkkinen L; Christiano AM  
; Uitto J; Eady RAJ; McGrath JA (REPRINT)

Corporate Source: UNITED MED & DENT SCH GUYS & ST THOMAS HOSP, ST THOMAS  
HOSP, LAMBETH PALACE RD/LONDON SE1 7EH/ENGLAND/ (REPRINT); UNITED MED  
& DENT SCH, ST THOMAS HOSP, ST JOHNS INST DERMATOL/LONDON SE1  
7EH/ENGLAND/; THOMAS JEFFERSON UNIV, JEFFERSON MED COLL, DEPT DERMATOL  
& CUTANEOUS BIOL/PHILADELPHIA/PA/19107; COLUMBIA UNIV, DEPT  
DERMATOL/NEW YORK/NY/

Journal: BRITISH JOURNAL OF DERMATOLOGY, 1997, V136, N5 (MAY), P674-677

ISSN: 0007-0963 Publication date: 19970500

Publisher: BLACKWELL SCIENCE LTD, OSNEY MEAD, OXFORD, OXON, ENGLAND OX2 0EL

Language: English Document Type: ARTICLE

Geographic Location: ENGLAND; USA

Subfile: CC LIFE--Current Contents, Life Sciences; CC CLIN--Current  
Contents, Clinical Medicine;

Journal Subject Category: DERMATOLOGY & VENEREAL DISEASES

Abstract: The three genes (LAMA3, LAMB3 and LAMC2) that encode the  
anchoring filament protein, laminin 5, may all harbour  
pathogenetic mutations in the autosomal recessive blistering skin  
disorder, junctional epidermolysis bullosa (JEB). Recently, one  
particular mutation, R635X in the LAMB3 gene, has been found to  
account for approximately 40% of all JEB laminin 5 mutations  
(Kivirikko et al., Hum Mol Genet 1996; 5: 231-7). In this study, we  
assessed the frequency of this mutation in 12 British patients  
with lethal (Herlitz) JEB using PCR amplification of genomic DNA and  
restriction endonuclease digestion. The mutation R635X was found  
in seven of 24 (29%) mutant alleles, confirming its relative frequency  
within the British gene pool. In addition, haplotype analysis using  
intragenic polymorphisms showed that the mutation arose on at  
least four different haplotype backgrounds, suggesting it represents a  
mutational hotspot rather than propagation of a common British  
ancestral allele. These findings support the hypermutable nature of  
this CpG dinucleotide and have implications in screening for  
laminin 5 gene mutations in British and other patients with JEB.

Identifiers--KeyWord Plus(R): DIAGNOSIS; GENE

Research Fronts: 95-0068 001 (DYSTROPHIN GENE; SARCOGLYCAN COMPLEX; MDX  
MUSCLE)

95-4533 001 (P53 GENE; SPONTANEOUS HPRT MUTATIONS; CPG CYTOSINE  
METHYLATION; HOMOZYGOUS FAMILIAL HYPERCHOLESTEROLEMIA; BASE  
EXCISION-REPAIR; HPAIL METHYLTRANSFERASE)

95-5061 001 (STRUCTURAL GENE; GLTC-DEPENDENT REGULATION OF  
BACILLUS-SUBTILIS GLUTAMATE SYNTHASE EXPRESSION; ARABIDOPSIS TYPE-1  
PROTEIN PHOSPHATASE)

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 PULKKINEN L, 1995, V6, P77, HUM MUTAT  
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 TIDMAN MJ, 1986, V86, P51, J INVEST DERMATOL

18/9/5 (Item 4 from file: 34)  
 DIALOG(R)File 34:SciSearch(R) Cited Ref Sci  
 (c) 2003 Inst for Sci Info. All rts. reserv.

05702502 Genuine Article#: WR230 Number of References: 28  
 Title: Fabry disease: Thirty-five mutations in the alpha-galactosidase A gene in patients with classic and variant phenotypes  
 Author(s): Eng CM (REPRINT); Ashley GA; Burgert TS; Enriquez AL; DSouza M; Desnick RJ  
 Corporate Source: CUNY MT SINAI SCH MED, DEPT HUMAN GENET, BOX 1498, 1 GUSTAVE LEVY PL/NEW YORK/NY/10029 (REPRINT); CUNY MT SINAI SCH MED, DEPT PEDIAT/NEW YORK/NY/10029  
 Journal: MOLECULAR MEDICINE, 1997, V3, N3 (MAR), P174-182  
 ISSN: 1076-1551 Publication date: 19970300  
 Publisher: SPRINGER VERLAG, 175 FIFTH AVE, NEW YORK, NY 10010  
 Language: English Document Type: ARTICLE  
 Geographic Location: USA  
 Subfile: CC LIFE--Current Contents, Life Sciences; CC CLIN--Current Contents, Clinical Medicine  
 Journal Subject Category: BIOCHEMISTRY & MOLECULAR BIOLOGY; MEDICINE, RESEARCH & EXPERIMENTAL; CELL BIOLOGY  
 Abstract: Background: Fabry disease, an X-linked inborn error of glycosphingolipid catabolism, results from mutations in the alpha-galactosidase A (alpha-Gal A) gene located at Xq22.1. To determine the nature and frequency of the molecular lesions causing the classical and milder variant Fabry phenotypes and for precise carrier detection, the alpha-Gal A lesions in 42 unrelated Fabry hemizygotes were determined. Materials and

Methods: Genomic DNA was isolated from affected probands and their family members. The seven alpha-galactosidase A exons and flanking intronic sequences were PCR amplified and the nucleotide sequence was determined by solid-phase direct sequencing.

Results: Two patients with the mild cardiac phenotype had missense mutations, I91T and F113L, respectively. In 38 classically affected patients, 33 new mutations were identified including 20 missense (MIT A31V, H46R, Y86C, L89P, D92Y, C94Y, A97V, R100T, Y134S, G138R, A143T, S148R, G163V, D170V, C202Y, Y216D, N263S, W287C, and N298S), two nonsense (Q386X, W399X), one splice site mutation (IVS4 + 2T -> C), and eight small exonic insertions or deletions (304del1, 613del9, 777del1, 1057del2, 1074del2, 1077del1, 1212del3, and 1094ins1), which identified exon 7 as a region prone to gene rearrangements. In addition, two unique complex rearrangements consisting of contiguous small insertions and deletions were found in exons 1 and 2 causing L45R/H46S and L120X, respectively.

Conclusions: These studies further define the heterogeneity of mutations causing Fabry disease, permit precise carrier identification and prenatal diagnosis in these families, and facilitate the

identification of candidates for enzyme replacement therapy.

Identifiers--KeyWord Plus(R): A-GENE; NUCLEOTIDE-SEQUENCE; ATYPICAL  
 VARIANT; ALPORT SYNDROME; IDENTIFICATION; CDNA; REARRANGEMENTS;  
 HEMIZYGOTES; MUTAGENESIS; EXPRESSION

Research Fronts: 95-1418 002 (TYPE-IV COLLAGEN ALPHA-5 CHAIN GENE  
 (COL4A5); AUTOSOMAL RECESSIVE ALPORT SYNDROME; RENAL GLOMERULUS OF MICE  
 LACKING S-LAMININ LAMININ BETA-2)

95-0369 001 (PLECKSTRIN HOMOLOGY DOMAINS; HETEROTRIMERIC G-PROTEINS;  
 CLONED PLANT K+ CHANNEL IN XENOPUS OOCYTES; X-LINKED  
 AGAMMAGLOBULINEMIA; CELLULAR EXPRESSION)

95-4533 001 (P53 GENE; SPONTANEOUS HPRT MUTATIONS; CPG CYTOSINE  
 METHYLATION; HOMOZYGOUS FAMILIAL HYPERCHOLESTEROLEMIA; BASE  
 EXCISION-REPAIR; HPAT METHYLTRANSFERASE)

95-5061 001 (STRUCTURAL GENE; GLTC-DEPENDENT REGULATION OF  
 BACILLUS-SUBTILIS GLUTAMATE SYNTHASE EXPRESSION; ARABIDOPSIS TYPE-1  
 PROTEIN PHOSPHATASE)

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18/9/6 (Item 1 from file: 155)  
 DIALOG(R)File 155:MEDLINE(R)  
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14561668 22520922 PMID: 12633536  
 A mutation in the LAMC2 gene causes the Herlitz junctional  
 epidermolysis bullosa (H-JEB) in two French draft horse breeds.  
 Milenkovic Dragan; Chaffaux Stephane; Taourit Sead; Guerin Gerard  
 Laboratoire de genetique biochimique et de cytogenetique, Departement de  
 genetique animale, Institut national de la recherche agronomique, Centre de  
 recherches de Jouy, 78352 Jouy-en-Josas Cedex, France.  
 Genetics, selection, evolution. - GSE (France) Mar-Apr 2003, 35 (2)  
 p249-56, ISSN 0999-193X Journal Code: 9114088  
 Document type: Journal Article  
 Languages: ENGLISH

Main Citation Owner: NLM

Record type: In Process

Subfile: INDEX MEDICUS

Epidermolysis bullosa (EB) is a heterogeneous group of inherited diseases characterised by skin blistering and fragility. In humans, one of the most severe forms of EB known as Herlitz-junctional EB (H-JEB), is caused by mutations in the laminin 5 genes. EB has been described in several species, like cattle, sheep, dogs, cats and horses where the mutation , a cytosine insertion in exon 10 of the LAMC2 gene, was very recently identified in Belgian horses as the mutation responsible for JEB. In this study, the same mutation was found to be totally associated with the JEB phenotype in two French draft horse breeds, Trait Breton and Trait Comtois. This result provides breeders a molecular test to better manage their breeding strategies by genetic counselling.

Record Date Created: 20030313

? type s18/full/allds

>>>'ALLDS' not recognized as item list

? ds

| Set | Items  | Description   |
|-----|--------|---|
| S1  | 1899   | "EPIDERMOLYSIS BULLOSA"   |
| S2  | 48,128 | CYTOSINE  |
| S3  | 586    | 1368  |
| S4  | 0      | ?1368?  |
| S5  | 700    | 1368?   |
| S6  | 40863  | LAMININ   |
| S7  | 1810   | S6 AND (INSERT OR MUTATION OR MUTATED OR INSERTION OR DELETION OR SUBSTITUTION) |
| S8  | 700    | S3 OR S5  |
| S9  | 0      | S1 AND S8   |
| S10 | 0      | S8 AND S2   |
| S11 | 37     | S7 AND S1   |
| S12 | 1      | S11 AND CYTOSINE  |
| S13 | 201    | LAMC2   |
| S14 | 0      | S13 AND S3  |
| S15 | 3      | S13 AND S5  |
| S16 | 2      | S1 AND S2   |
| S17 | 0      | (S3 OR S5) AND CYTOSINE   |
| S18 | 6      | S2 AND S7   |